

# **Nuclear Material Stabilization and Disposition (RL-0011)**

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**Deactivation and Decommissioning of Ancillary Facilities at the  
Plutonium Finishing Plant**

## Overview

This section addresses work in Project Baseline Summary RL-0011, *Nuclear Material Stabilization and Disposition*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of July 2004.

## Notable Accomplishments

A specific project execution plan (PEP) *Plutonium Finishing Plant Closure Project Execution Plan*, document number D&D-21452, was prepared for the project over the last couple of months and issued in July. This PEP outlines the project execution strategy and focuses on the contract period ending September 30, 2006.

### Disposition Special Nuclear Material (SNM)

FH has completed fabrication and delivery of eight out of a total of fourteen interim storage vaults. The contents of five interim storage casks (ISCs) were transferred to five interim storage vaults located in the PFP yard area in June. The five empty ISCs were returned to the Fast Flux Test Facility in July.

The highly enriched uranium fuel pins were shipped to the Oak Ridge National Laboratory in late July. This brings the total number of miscellaneous nuclear material items shipped to ten out of a total contract plan of 101.

### Disposition the PFP Facility

All punch-list items to complete demolition of five PFP facilities were completed July 21, 2004, supporting slab-on-grade by September 30, 2005. The five facilities that have been demolished (or excessed) are mobile offices 834, 839 and 264 (excessed), and the 234-ZB and 234-ZC buildings. Acceleration of the demolition of the remaining five ancillary buildings is under way.

The 232-Z Removal Action Work Plan was resubmitted to RL and the regulators in July 2004.

The vacuum stub on top of glovebox HC-9A to glovebox HC-1 was successfully removed. The hold-up material was removed and staged for an upcoming repackaging campaign into pipe overpack containers for disposal at the Waste Isolation Pilot Plant. Transfer Line 7C to 7A was declared "legacy and safeguards clean" meaning there is no more legacy plutonium material to recover from this transfer line, which was of significant concern to the Safeguards Program.

Fabrication and installation of glove box HA-9A personnel shielding is complete. The HA-9A bottom-level glove port reactivation is also complete. The remaining 60 glove ports are planned to be complete in early August. Cleaning of the glovebox windows (with special polishing wheels) is progressing along with new glove port activation.

Comments from RL have been incorporated into the Data Quality Objective and Sampling and Analysis Plan for the Above-Ground PFP Facilities. These documents were submitted to RL for approval with the Engineering Evaluation/Cost Analysis on July 28, 2004.

## Issues

**SNM De-inventory Delay:** Authorization to allow shipment of Hanford plutonium to the Savannah River Site by August 30, 2004, is in jeopardy. Delays in authorization will result in equivalent delays in completion of de-inventory of the PFP complex.

### FY 2004 FH Funds vs. Spend Forecast (\$000)

	FY 2004 Anticipated Funding w/Carryover	FY 2004 Fiscal Year Spend Forecast	Variance
Nuclear Materials Stabilization & Disposition	\$ 153,184	\$ 146,792	\$ 6,392

The current spend forecast indicates the behind-schedule progress (on selected D&D activities with a corresponding impact to solid waste disposal activities) is contributing to the projected year-end funding variance. This scope and associated funding will carry over into FY 2005.

### FY 2004 Schedule/Cost Performance (\$000)

	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
Nuclear Materials Stabilization & Disposition	120,500	115,643	111,231	-4,857	-4%	4,413	4%	153,698

Numbers are rounded to the nearest \$K and include the closure services allocation.

#### Schedule Performance (-\$4,857K/-4%):

Primary contributors to the unfavorable schedule variance include:

- D&D activities were delayed due to staff ramp-up (234-5Z), Tank D-5 liquid waste transfers (241-Z), subcontract and material procurements (legacy holdup), and sampling (lab support for transition) (-\$2.6M);
- Earned value on transition operation support apportioned to delayed D&D work scope and being behind schedule on facility modifications (-\$1.2M);
- Corresponding delays in solid waste disposal activities from delayed D&D activities (-\$1.7M); and
- Early completion of plutonium stabilization activities, under budget (+\$0.6M).

#### Cost Performance (+\$4,413K/+4%):

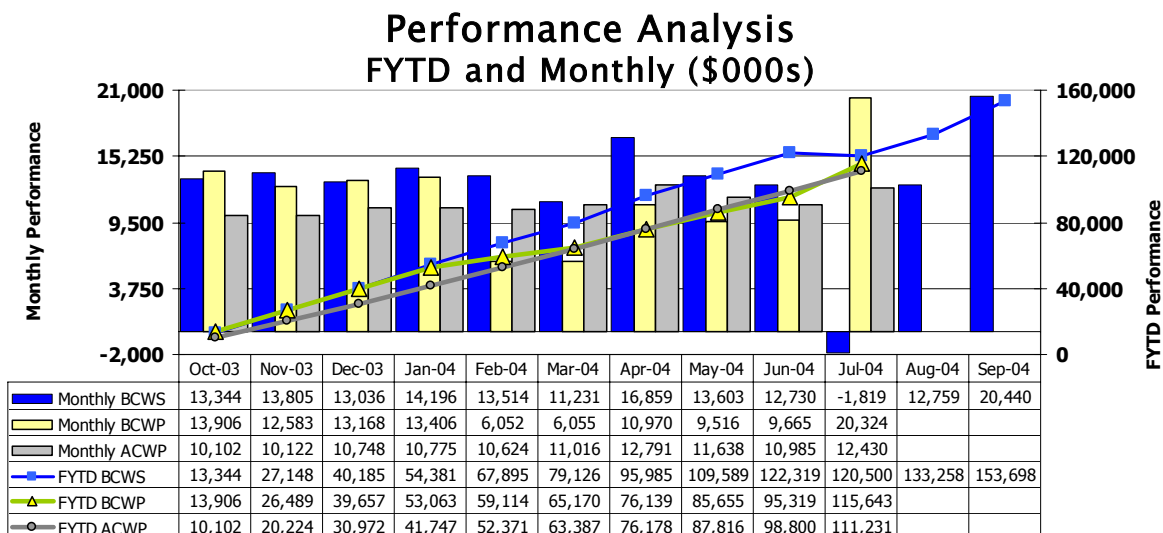
Primary contributors to the favorable cost variance include:

- Efficiencies in plutonium stabilization activities (\$2.6M);
- Efficiencies in min-safe surveillance operations and corrective/preventive maintenance (\$1.5M);
- Efficiencies in 236-Z transition D&D activities (\$0.2M); and
- Revenue and work transfers in closure services (\$1.0M).

This positive variance is partially offset by:

- Dedicated partial staffing for 241-Z with little progress due to the Tank D5 liquid transfer delay, and unplanned scope associated with 241-Z tank hazards analysis (-\$0.9M).

## FY 2004 Schedule/Cost Performance, continued



## Milestone Achievement

Number	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status/Comments
TRP-02-501	Complete Stabilization and Packaging of Polycubes	DNFSB	3/31/03	2/28/03		Complete
TRP-03-501	Submit Facility End Point Criteria Document to Ecology	TPA	9/30/03	9/30/03		Complete
TRP-03-503	Submit to Ecology a PFP Residual Chemical Hazards Assessment	TPA	12/31/02	12/27/02		Complete
TRP-03-504	Submit Closure Plan for 241-Z Waste Treatment Facility TSD & RCRA Units to Ecology	TPA	7/31/03	7/25/03		Complete
TRP-04-506	Complete Plutonium (Pu) Stabilization & Packaging	PI	2/18/04	2/12/04		Complete
TRP-04-508	Complete Repackaging of PFP Residues and Ship to Central Waste Complex (CWC)	TPA	4/30/04	3/11/04		Complete
TRP-04-509	Submit PFP Legacy Holdup Removal Plan to Ecology	TPA	12/31/03	10/15/03		Complete
TRP-05-501 TRP-05-506	Discontinue Waste Discharges from the 241-Z Tanks to Tank Farms	TPA PI	6/30/05		6/30/05	On Schedule
TRP-05-503	Complete Deinventory of DOE-STD-3013 Containers & Unirradiated Fuel by Shipment to SRS or Other Approved Location	PI	9/30/06		9/30/06	On Schedule
TRP-05-504	Complete Legacy Pu Holdup Removal	PI	9/30/05		7/31/05	Ahead of Schedule
TRP-05-505	Transition 10 Facilities to Slab-on-Grade	PI	9/30/05		9/30/05	On Schedule
TRP-06-500	Decontaminate Glovebox HA-20MB	TPA	3/31/06		3/31/06	On Schedule
TRP-06-501	Complete Pu Legacy Holdup Removal	TPA	9/30/06		7/31/05	Ahead of Schedule
TRP-06-502	Transition 232-Z Bldg Incinerator to Slab-on-Grade	TPA	9/30/06		11/30/05	Ahead of Schedule
TRP-06-503	Remove Remaining SNM From PFP Such That Protected Area Not Required	PI	9/30/06		9/30/06	On Schedule
TRP-06-507	Transition 232-Z Bldg Incinerator to Slab-on-Grade	PI	3/31/06		11/30/05	Ahead of Schedule
TRP-06-509	Disposition Miscellaneous PFP Nuclear Materials	PI	9/30/06		9/30/06	On Schedule
TRP-06-510	Transition 241-Z/ZA Facility to Demolition Ready	PI	9/30/06		9/30/06	On Schedule
TRP-06-511	Remove or Decontaminate 236-Z Pencil Tanks	PI	9/30/06		9/30/06	On Schedule
TRP-06-512	Remove or Decontaminate the 236-Z Process Equipment in Rooms 50 & 60	PI	9/30/06		9/30/06	On Schedule
TRP-06-513	Remove or Decontaminate the Remaining 236-Z Process Equipment	PI	9/30/06		9/30/06	On Schedule
TRP-06-514	Remove or Decontaminate 189 Gloveboxes and Hoods in 234-5Z	PI	9/30/06		9/30/06	On Schedule
TRP-06-515	Complete 242-Z Initial Entry & Characterization	PI	9/30/06		9/30/06	On Schedule
TRP-06-516	Cleanout Pu & Am Contaminated Gloveboxes and Tanks in 242-Z	PI	9/30/06		9/30/06	On Schedule
TRP-06-517	Dispose of Approximately 600 Pu Nitrate Containers at PFP	PI	9/30/06		9/30/06	On Schedule